

WHAT IS CLAIMED IS:

1. A disc device comprising:

a disc;

5 a driving section configured to support and rotate the disc;

a head configured to record and reproduce information onto and from the disc; and

a case containing the disc, the driving section and the head,

10 the case including:

a case main unit having an opening;

and

a cover secured to the case main unit, closing the opening and opposing the disc, and

15 the cover including:

a first arcuate stepped portion opposing an outer periphery of the disc;

20 a second arcuate stepped portion located closer to the disc than the first stepped portion; and

a second arcuate stepped portion located closer to the disc than the second stepped portion.

25 2. The disc device according to claim 1, wherein the first to third stepped portions concentrically extend through at least 180° away from a movement route of the head, opposing the disc.

3. The disc device according to claim 2, wherein the second stepped portion is provided inside the first stepped portion, and the third stepped portion is included in the second stepped portion.

5           4. The disc device according to claim 3, wherein the a fourth substantially circular stepped portion is provided inside the second stepped portion, the fourth stepped portion opposing a hub used to attach the disc to the driving section.

10           5. The disc device according to claim 4, wherein the fourth stepped portion has substantially a same height as the first stepped portion.

15           6. The disc device according to claim 3, wherein a ratio of a height difference between the first and second stepped portions to a height difference between the first and third stepped portions falls within a range of 0.3 to 0.85.

20           7. The disc device according to claim 3, wherein a ratio of a radial width of the second stepped portion to a radial width of the third stepped portion falls within a range of 0.3 to 0.9.

25           8. A disc device comprising:  
a disc;  
a driving section configured to support and rotate the disc;

a head configured to record and reproduce information onto and from the disc; and

a case containing the disc, the driving section  
and the head,

the case including:

a case main unit having an opening;

5 and

a cover secured to the case main unit,  
closing the opening and opposing the disc, and

the flat cover including:

a first arcuate stepped portion

10 opposing an outer periphery of the disc;

a second arcuate stepped portion

located closer to the disc than the first stepped  
portion;

a second arcuate stepped portion

15 located closer to the disc than the second stepped  
portion;

a plurality of fixing sections used to  
fix the cover to the case main unit; and

at least one groove radially extending

20 from a portion of the cover near one of the fixing  
sections toward a central portion of the cover  
opposing a center of the disc.

9. The disc device according to claim 8, wherein  
the first to third stepped portions concentrically  
25 extend through at least 180° away from a movement  
route of the head, opposing the disc.

10. The disc device according to claim 9, wherein

the second stepped portion is provided inside the first stepped portion, and the third stepped portion is included in the second stepped portion.

11. The disc device according to claim 10,  
5 wherein a ratio of a height difference between the first and second stepped portions to a height difference between the first and third stepped portions falls within a range of 0.3 to 0.85.

12. The disc device according to claim 10,  
10 wherein a ratio of a radial width of the second stepped portion to a radial width of the third stepped portion falls within a range of 0.3 to 0.9.

13. The disc device according to claim 8, wherein  
15 the groove is formed at substantially a same level as the second stepped portion.

14. A disc device comprising:

a disc;

a driving section configured to support and rotate the disc;

20 a head configured to record and reproduce information onto and from the disc; and

a case containing the disc, the driving section and the head,

the case including:

25 a case main unit having an opening;

and

a cover secured to the case main unit,

closing the opening and opposing the disc, and  
the cover including:

a first arcuate stepped portion  
opposing an outer periphery of the disc;

5 a second arcuate stepped portion  
located closer to the disc than the first stepped  
portion;

a second arcuate stepped portion  
located closer to the disc than the second stepped  
10 portion; and

a stepped control portion located closer to  
the disc than the third stepped portion, the stepped  
control portion suppressing vibration of the outer  
periphery of the disc in a direction parallel to  
15 a surface of the disc.

15. The disc device according to claim 14,  
wherein the first to third stepped portions  
concentrically extend through at least 180° away from  
a movement route of the head, opposing the disc.

20 16. The disc device according to claim 15,  
wherein the second stepped portion is provided inside  
the first stepped portion, and the third stepped  
portion is included in the second stepped portion.

25 17. The disc device according to claim 16,  
wherein a ratio of a height difference between the  
first and second stepped portions to a height  
difference between the first and third stepped

portions falls within a range of 0.3 to 0.85.

18. The disc device according to claim 16,  
wherein a ratio of a radial width of the second  
stepped portion to a radial width of the third stepped  
5 portion falls within a range of 0.3 to 0.9.

19. The disc device according to claim 17,  
wherein the cover further comprises:

a plurality of fixing sections used to fix the  
cover to the case main unit; and

10 at least one groove radially extending from  
a portion of the flat cover near one of the fixing  
sections toward a central portion of the cover  
opposing a center of the disc.

20. The disc device according to claim 14,  
15 wherein the stepped control portion is formed arcuate  
along an outer periphery of the first stepped portion.

21. The disc device according to claim 14,  
wherein the stepped control portion diametrically  
opposes a holding mechanism with the disc interposed  
20 therebetween, the holding mechanism being used to hold  
the head in a retracted position deviated from a  
position in which the head is positioned above the  
disc.